Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-15. (canceled)

16. (Currently amended) A diagnostic kit comprising an isolated antibody, or a fragment thereof, that

a) binds EAl ~~antigen~~ polypeptide of *B. anthracis* and

b) specifically binds spores or vegetative cells of *B. anthracis*~~, but not~~ relative to the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*.

17. (Currently amended) The diagnostic kit of claim 16 ~~which incorporates~~ further comprising a colloidal particle based lateral flow detection system.

18. (Currently amended) The diagnostic kit of claim 16 ~~which incorporates~~ further comprising a detection system selected from ~~the group consisting of~~ a carbon based lateral flow system; a fluorescent based assay system, a chemiluminescent system, an up converting phosphors system, a refractive indexed based detection system, a magnetic bead or latex bead system, and a micro array system.

19. (Currently amended) A diagnostic kit comprising an isolated antibody, or a fragment thereof, that

a) binds EAl ~~antigen~~ polypeptide of *B. anthracis* and

b) specifically binds spores of *B. anthracis* ~~and not~~ relative to spores of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*; and further comprises ~~incorporates~~ a colloidal particle based lateral flow detection system.

20-43. (canceled)

44. (Currently amended) The diagnostic kit of claim 16, wherein said antibody, or a fragment thereof, does not ~~specifically~~ bind *B. cereus*.

45-49. (canceled)

50. (Previously presented) The kit of claim 16, wherein said antibody or fragment thereof is *B. anthracis* species specific.

51. (Previously presented) The kit of claim 16, wherein said antibody an IgA, IgD, IgE, IgG, or IgM.

52. (Previously presented) The kit of claim 16, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof.

53. (Previously presented) The kit of claim 16, wherein said antibody or fragment thereof specifically binds *B. anthracis* spores.

54. (Currently amended) The kit of claim 16, wherein said antibody or fragment thereof specifically binds *B. anthracis* vegetative cells.[[.]]

55. (canceled)

56. (Previously presented) The kit of claim 16, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody or an affinity-purified antibody.

57. (Previously presented) The kit of claim 16, wherein said fragment is an Fab or Fv fragment.

58. (Previously presented) The kit of claim 16, wherein said antibody is produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632.

59. (Currently amended) An isolated antibody, or fragment thereof, that

a) binds EA1 ~~antigen~~ polypeptide of *B. anthracis* and

b) specifically binds spores or vegetative cells of *B. anthracis*~~, but not~~ relative to the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*.

60. (Previously presented) The antibody or fragment thereof of claim 59, wherein said antibody or fragment thereof is *B. anthracis* species specific.

61. (Previously presented) The antibody of claim 59, wherein said antibody an IgA, IgD, IgE, IgG, or IgM.

62. (Currently amended) The antibody or fragment thereof of claim 59, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof~~, and wherein said antibody is optionally a monoclonal antibody~~.

63. (Currently amended) The antibody or fragment thereof of claim 59, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody; an affinity-purified antibody; or an antibody produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632~~; or~~

~~wherein said fragment is an Fab or Fv fragment~~.

64. (Currently amended) A method of detecting *B. anthracis* in a sample, said method comprising

contacting an antibody, or fragment thereof, according to claim 59 with a sample to form a complex between said antibody, or fragment, and *B. anthracis* in said sample, and

detecting said complex, which contains *B. anthracis* from said sample.

65. (New) The antibody or fragment thereof of claim 59, wherein said fragment is an Fab or Fv fragment.

66. (New) A diagnostic kit comprising an isolated monoclonal antibody, or a fragment thereof, that

a) binds EAl polypeptide of *B. anthracis* and

b) specifically binds spores or vegetative cells of *B. anthracis* relative to the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*.

67. (New) The diagnostic kit of claim 66 further comprising a colloidal particle based lateral flow detection system.

68. (New) The diagnostic kit of claim 16 further comprising a detection system selected from a carbon based lateral flow system; a fluorescent based assay system, a chemiluminescent system, an up converting phosphors system, a refractive indexed based detection system, a magnetic bead or latex bead system, and a micro array system.

69. (Currently amended) A diagnostic kit comprising an isolated monoclonal antibody, or a fragment thereof, that

a) binds EAl polypeptide of *B. anthracis* and

b) specifically binds spores of *B. anthracis* relative to spores of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*; and further comprises

a colloidal particle based lateral flow detection system.

70. (New) The diagnostic kit of claim 66, wherein said antibody, or a fragment thereof, does not bind *B. cereus*.

71. (New) The kit of claim 66, wherein said antibody or fragment thereof is *B. anthracis* species specific.

72. (New) The kit of claim 66, wherein said antibody an IgA, IgD, IgE, IgG, or IgM.

73. (New) The kit of claim 66, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof.

74. (New) The kit of claim 66, wherein said antibody or fragment thereof specifically binds *B. anthracis* spores.

75. (New) The kit of claim 66, wherein said antibody or fragment thereof specifically binds *B. anthracis* vegetative cells.

76. (New) The kit of claim 66, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody or an affinity-purified antibody.

77. (New) The kit of claim 66, wherein said fragment is an Fab or Fv fragment.

78. (New) The kit of claim 66, wherein said antibody is produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632.

79. (New) An isolated monoclonal antibody, or fragment thereof, that

a) binds EA1 polypeptide of *B. anthracis* and

b) specifically binds spores or vegetative cells of *B. anthracis* relative to the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*.

80. (New) The antibody or fragment thereof of claim 79, wherein said antibody or fragment thereof is *B. anthracis* species specific.

81. (New) The antibody of claim 79, wherein said antibody an IgA, IgD, IgE, IgG, or IgM.

82. (New) The antibody or fragment thereof of claim 79, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof.

83. (New) The antibody or fragment thereof of claim 79, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody; an affinity-purified antibody; or an antibody produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632.

84. (New) The antibody or fragment thereof of claim 79, wherein said fragment is an Fab or Fv fragment.

85. (New) A method of detecting *B. anthracis* in a sample, said method comprising

contacting an antibody, or fragment thereof, according to claim 79 with a sample to form a complex between said antibody, or fragment, and *B. anthracis* in said sample, and

detecting said complex, which contains *B. anthracis* from said sample.